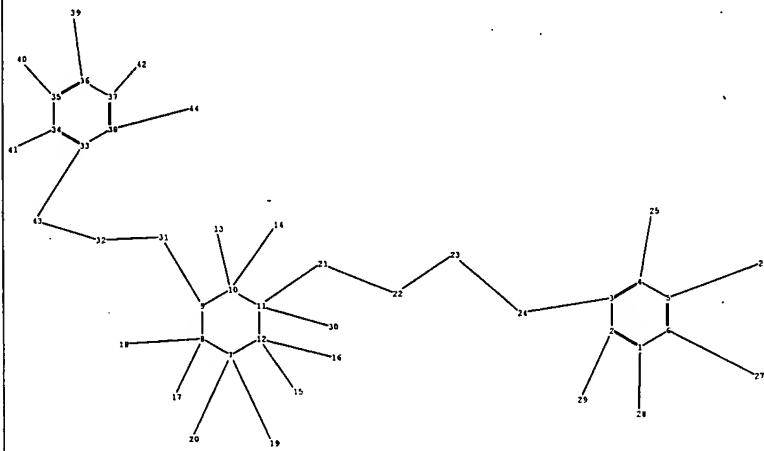
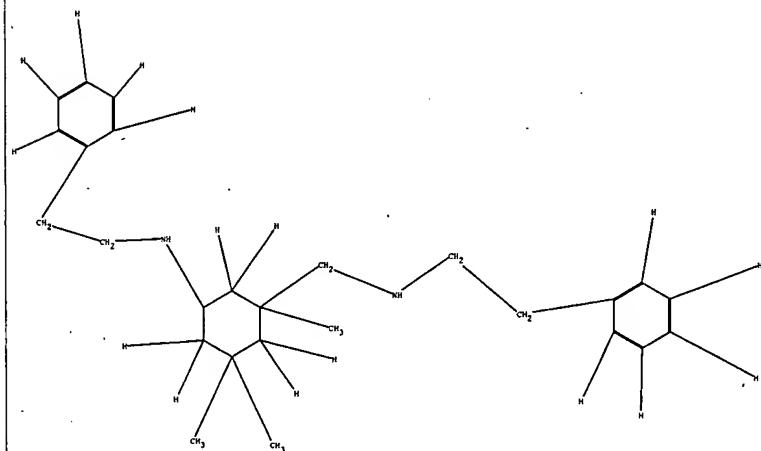


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chain nodes :
  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31
ring nodes :
  1  2  3  4  5  6  7  8  9  10  11  12
chain bonds :
  1-29  2-30  3-25  4-26  5-27  6-28  7-20  7-21  8-18  8-19  9-13  10-14
  10-15  11-22  11-31  12-16  12-17  22-23  23-24  24-25
ring bonds :
  1-2  1-6  2-3  3-4  4-5  5-6  7-8  7-12  8-9  9-10  10-11  11-12
exact/norm bonds :
  7-8  7-12  8-9  9-10  9-13  10-11  11-12
exact bonds :
  1-29  2-30  3-25  4-26  5-27  6-28  7-20  7-21  8-18  8-19  10-14  10-15
  11-22  11-31  12-16  12-17  22-23  23-24  24-25
normalized bonds :
  1-2  1-6  2-3  3-4  4-5  5-6

Match level :
  1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom
 10:Atom 11:Atom 12:Atom 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS
18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS
25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS

```



chain nodes :

13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
32 39 40 41 42 43 44

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 33 34 35 36 37 38

chain bonds :

1-28 2-29 3-24 4-25 5-26 6-27 7-19 7-20 8-17 8-18 9-31 10-13
10-14 11-21 11-30 12-15 12-16 21-22 22-23 23-24 31-32 32-43 33-43
34-41 35-40 36-39 37-42 38-44

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 33-34
33-38 34-35 35-36 36-37 37-38

exact/norm bonds :

7-8 7-12 8-9 9-10 9-31 10-11 11-12

exact bonds :

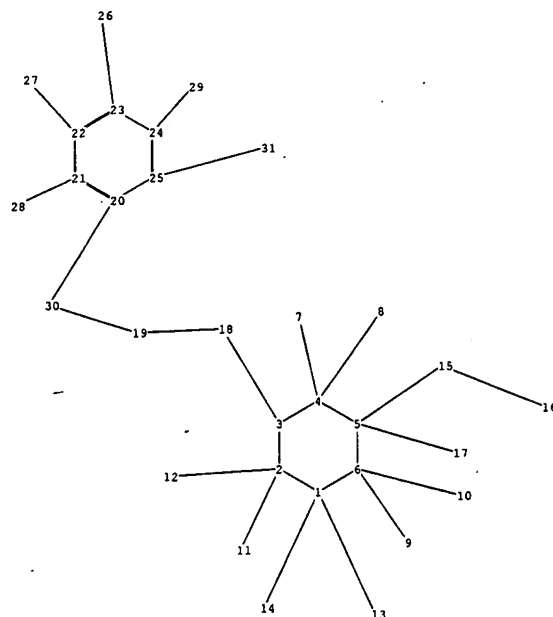
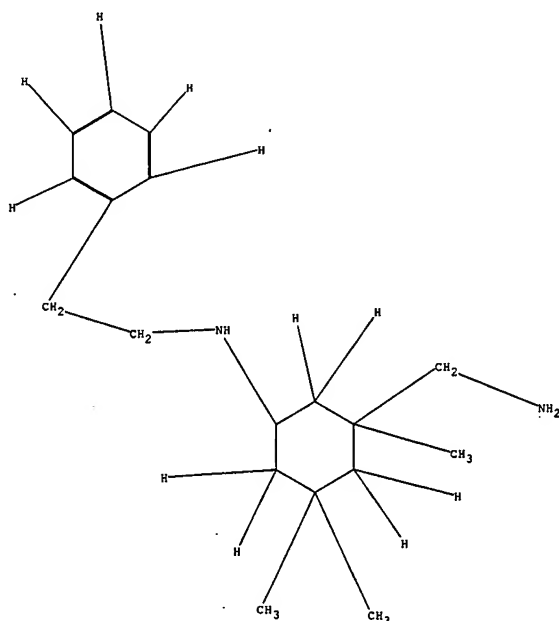
1-28 2-29 3-24 4-25 5-26 6-27 7-19 7-20 8-17 8-18 10-13 10-14
11-21 11-30 12-15 12-16 21-22 22-23 23-24 31-32 32-43 33-43 34-41
35-40 36-39 37-42 38-44

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 33-34 33-38 34-35 35-36 36-37 37-38

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom
10:Atom 11:Atom 12:Atom 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS
18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS
25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS
32:CLASS 33:Atom 34:Atom 35:Atom 36:Atom 37:Atom 38:Atom 39:CLASS
40:CLASS 41:CLASS 42:CLASS 43:CLASS 44:CLASS



chain nodes :

7 8 9 10 11 12 13 14 15 16 17 18 19 26 27 28 29 30 31

ring nodes :

1 2 3 4 5 6 20 21 22 23 24 25

chain bonds :

1-13 1-14 2-11 2-12 3-18 4-7 4-8 5-15 5-17 6-9 6-10 15-16 18-19
19-30 20-30 21-28 22-27 23-26 24-29 25-31

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 20-21 20-25 21-22 22-23 23-24 24-25

exact/norm bonds :

1-2 1-6 2-3 3-4 3-18 4-5 5-6

exact bonds :

1-13 1-14 2-11 2-12 4-7 4-8 5-15 5-17 6-9 6-10 15-16 18-19
19-30 20-30 21-28 22-27 23-26 24-29 25-31

normalized bonds :

20-21 20-25 21-22 22-23 23-24 24-25

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS
17:CLASS 18:CLASS 19:CLASS 20:Atom 21:Atom 22:Atom 23:Atom 24:Atom
25:Atom 26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS

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REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

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100.0% PROCESSED 116 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

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L4 1 L3

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L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:261002 CAPLUS
DOCUMENT NUMBER: 140:288916
TITLE: Modified cyclic aliphatic polyamine, epoxy resin composition, and cured product
INVENTOR(S): Koyama, Takeshi; Ichikawa, Tetsushi; Kuwahara, Hisayuki; Echigo, Masatoshi
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1403244	A2	20040331	EP 2003-20588	20030918

EP 1403244 A3 20040804
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 JP 2004115427 A 20040415 JP 2002-280556 20020926
 JP 2004217560 A 20040805 JP 2003-6126 20030114
 US 2004106684 A1 20040603 US 2003-669701 20030925
 PRIORITY APPLN. INFO.: JP 2002-280556 A 20020926
 JP 2003-6126 A 20030114

AB A modified cyclic aliphatic polyamine has a low viscosity and content of unreacted polyamine and when used as a curing agent for an epoxy resin composition has an improved workability without adding solvent or diluent. The above modified cyclic aliphatic polyamine is obtained by addition reaction of a cyclic aliphatic polyamine such as isophoronediamine and norbornanediamine and an alkenyl compound such as styrene. The reaction of 4 mol isophoronediamine and 4 mol styrene gave a product (containing mono and di substituted diamine) which was used to cure an Epicoat 828 coating composition (48 phr cure agent) showing excellent water resistance (water drop test at 1/4/7 day intervals), chemical resistance (10% NaOH and H2SO4 solns. for 7 days at room temperature), and salt spray resistance (JIS K5400).

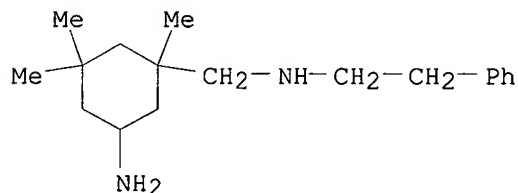
IT 675455-85-3P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(styrene modified cyclic aliphatic polyamine crosslinker for epoxy resin cured product and coating having improved water, chemical and corrosion resistance)

RN 675455-85-3 CAPLUS

CN Benzeneethanamine, N-[(5-amino-1,3,3-trimethylcyclohexyl)methyl]- (9CI)
 (CA INDEX NAME)



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FILE COVERS 1907 - 23 Jan 2007 VOL 146 ISS 5
FILE LAST UPDATED: 22 Jan 2007 (20070122/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
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<http://www.cas.org/infopolicy.html>

=> S L1 FULL

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...
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100.0% PROCESSED 43 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

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L4 1 L3

=> D L4 IBIB ABS HITSTR 1

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:261002 CAPLUS
DOCUMENT NUMBER: 140:288916
TITLE: Modified cyclic aliphatic polyamine, epoxy resin composition, and cured product
INVENTOR(S): Koyama, Takeshi; Ichikawa, Tetsushi; Kuwahara, Hisayuki; Echigo, Masatoshi
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1403244	A2	20040331	EP 2003-20588	20030918
EP 1403244	A3	20040804		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004115427	A	20040415	JP 2002-280556	20020926
JP 2004217560	A	20040805	JP 2003-6126	20030114
US 2004106684	A1	20040603	US 2003-669701	20030925
PRIORITY APPLN. INFO.:			JP 2002-280556	A 20020926
			JP 2003-6126	A 20030114

AB A modified cyclic aliphatic polyamine has a low viscosity and content of unreacted polyamine and when used as a curing agent for an epoxy resin composition has an improved workability without adding solvent or diluent. The above modified cyclic aliphatic polyamine is obtained by addition reaction of a cyclic aliphatic polyamine such as isophoronediamine and norbornanediamine and an alkenyl compound such as styrene. The reaction of 4 mol isophoronediamine and 4 mol styrene gave a product (containing mono and di substituted diamine) which was used to cure an Epicoat 828 coating composition (48 phr cure agent) showing excellent water resistance (water drop test at 1/4/7 day intervals), chemical resistance (10% NaOH and H2SO4 solns. for 7 days at room temperature), and salt spray resistance (JIS K5400).

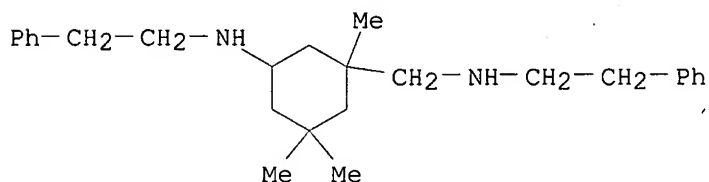
IT 675455-97-7P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(styrene modified cyclic aliphatic polyamine crosslinker for epoxy resin cured product and coating having improved water, chemical and corrosion resistance)

RN 675455-97-7 CAPLUS

CN Benzeneethanamine, N-[[1,3,3-trimethyl-5-[(2-phenylethyl)amino]cyclohexyl]methyl]- (9CI) (CA INDEX NAME)



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FILE COVERS 1907 - 23 Jan 2007 VOL 146 ISS 5
FILE LAST UPDATED: 22 Jan 2007 (20070122/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> S L1 FULL

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

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FULL SCREEN SEARCH COMPLETED - 43 TO ITERATE

100.0% PROCESSED 43 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

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L4 1 L3

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L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:261002 CAPLUS

DOCUMENT NUMBER: 140:288916

TITLE: Modified cyclic aliphatic polyamine, epoxy resin
composition, and cured product

INVENTOR(S): Koyama, Takeshi; Ichikawa, Tetsushi; Kuwahara,
Hisayuki; Echigo, Masatoshi

PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan

SOURCE: Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1403244	A2	20040331	EP 2003-20588	20030918
EP 1403244	A3	20040804		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004115427	A	20040415	JP 2002-280556	20020926
JP 2004217560	A	20040805	JP 2003-6126	20030114
US 2004106684	A1	20040603	US 2003-669701	20030925
PRIORITY APPLN. INFO.:			JP 2002-280556	A 20020926
			JP 2003-6126	A 20030114

AB A modified cyclic aliphatic polyamine has a low viscosity and content of unreacted polyamine and when used as a curing agent for an epoxy resin composition has an improved workability without adding solvent or diluent. The above modified cyclic aliphatic polyamine is obtained by addition reaction of a cyclic aliphatic polyamine such as isophoronediamine and norbornanediamine and an alkenyl compound such as styrene. The reaction of 4 mol isophoronediamine and 4 mol styrene gave a product (containing mono and di substituted diamine) which was used to cure an Epicoat 828 coating composition (48 phr cure agent) showing excellent water resistance (water drop test at 1/4/7 day intervals), chemical resistance (10% NaOH and H2SO4 solns. for 7 days at room temperature), and salt spray resistance (JIS K5400).

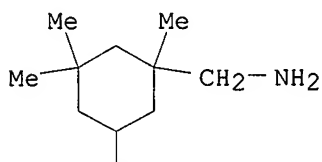
IT 675455-91-1P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(styrene modified cyclic aliphatic polyamine crosslinker for epoxy resin cured product and coating having improved water, chemical and corrosion resistance)

RN 675455-91-1 CAPLUS

CN Benzeneethanamine, N-[3-(aminomethyl)-3,5,5-trimethylcyclohexyl]- (9CI)
(CA INDEX NAME)



Ph-CH₂-CH₂-NH